

CLAIMS

1. A ball catcher for selectively retaining drop balls in a tool string, the ball catcher comprising a substantially cylindrical body having a main bore running axially therethrough, at least a portion of the main bore being restrained to a first and a second bore running axially therethrough, the first and second bores being parallel and wherein the first bore includes restriction means at an end thereof.
2. A ball catcher as claimed in Claim 1, wherein the first and second bores are partially overlapping to provide a channel therebetween.
3. A ball catcher as claimed in Claim 1 or Claim 2, wherein the main bore is located centrally on the body.
4. A ball catcher as claimed in any preceding Claims, wherein the portion of the main bore includes an entry port, the entry port having a first aperture equal to the diameter of the first bore and a second aperture having a diameter less than the diameter of the first bore, the apertures being aligned with the first and second bores respectively.
5. A ball catcher as claimed in Claim 4, wherein the entry port is inclined with respect to the main bore.

6. A ball catcher as claimed in Claim 4 when dependent on Claim 2, wherein the second aperture has a diameter substantially equal to the width of the channel.
7. A ball catcher as claimed in any preceding Claim, wherein the restraining means is a third bore coaxially aligned with the first bore and having a diameter less than the diameter of the first bore.
8. A ball catcher as claimed in any preceding Claim, wherein the second bore is located centrally on the body.
9. A method of selectively retaining drop balls in a tool string, comprising the steps:
  - (a) inserting in a tool string a ball catcher including a first bore having retaining means and a second bore passing therethrough, the bores including an overlapping portion to provide a channel therebetween;
  - (b) dropping a first ball of a first diameter through the tool string;
  - (c) directing the first ball into the first bore; and
  - (d) retaining the first ball in the first bore.
10. A method as claimed in Claim 9, wherein the method further includes the steps of:

- (a) dropping a second ball of a second diameter, the second diameter being smaller than the first diameter through the tool string;
- (b) directing the second ball into the first bore;
- (c) passing the second ball through the channel into the second bore; and
- (d) releasing the second ball from the ball catcher into the tool string.

11. A method as claimed in Claim 9, wherein the method further includes the steps:

- (a) dropping a second ball of a second diameter, the second diameter being smaller than the first diameter through the tool string;
- (b) passing the second ball through the second bore; and
- (c) releasing the second ball from the ball catcher into the tool string.

12. A method as claimed in any one of Claims 9 to 11, wherein the method includes the step of passing a tool through the second bore into the tool string below the ball catcher.

13. A method as claimed in any one of Claims 9 to 12, wherein the method includes the step of actuating a tool above the ball catcher with the first ball.

14. A method as claimed in any one of Claims 10 to 13, wherein the method includes the step of actuating a tool below the ball catcher with the second ball.